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ABSTRACT

The proceedings of a conference on learner-machine interaction in computer-assisted language learning (CALL) include the texts of four papers, descriptions of program demonstrations and talks given by participants, a report on the plenary session by Eric Brown, information sources about CALL, a comment on the workshop by Leslie Churchman, a review of current related research in Britain, a list of workshop participants, and a list of CALL practitioners and their research in progress. The papers are: "Input Devices for Language Work with Computers" (Alan Shaw); "Output Devices--The Interactive Video" (Cathy Watts, Angela Pickering); "The Autotutor--Interactive Video for Language Learning" (David Little); and "CALL, in France--The Current State of the Art" (Francoise Demaiziere). (MSE)

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Report

of the

IEC/CILT Computer-Assisted Language Learning Workshop

"LEARNER/MACHINE INTERACTION IN COMPUTER-ASSISTED LANGUAGE LEARNING"

held at St Martin's College, Lancaster

on 18th and 19th September, 1984

Complied by Eric Brown, CILT, Regent's College, Inner Circle,

Regent's Park, London NW1 4NS

March 1985

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"LEARNER/MACHINE INTERACTION IN COMPUTER-ASSISTED LANGUAGE LEARNING"

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Input devices for language work with computers

Microcomputers will soon be common-place devices in schools and homes, with a possibly stereotyped image of use with a QWERTY keyboard and TV/monitor. Historically, the computer has never had fixed methods of getting information in or out, so the present microcomputer combos must not be regarded as the only, and certainly not the best, way humans can interact with the machine.

The earliest computers had banks of lights and switches, which had to be manually set or read to exchange information - one switchbank pattern representing one instruction or one unit of information. To speed things up ticker-tape was used, with combinations of holes in the paper being converted to/from instructions or information.

Some computers can be coupled directly with scientific experiments to measure voltages produced, and can control experiments by switching environmental controls on/off. Light intensity can be measured rapidly, even to the extent of detecting the point on a TV/monitor screen at which a light-pen is directed. It should be inferred from this brief account that there are no fixed ideas about methods of getting information in and out of microcomputers.

I have been experimenting with two devices which can be used to supplement, indeed in some situations to replace, the QWERTY keyboard and the TV/monitor for some aspects of English language development. My attention has been directed mainly toward the encouragement of reading and creative writing skills for infants and slower learners; nevertheless, encouraged by David Peacock of St Martin's College, Lancaster, I have spent a little time looking at the feasibility of the devices for use with French teaching.

The STAR Concept keyboard is a touch-sensitive device which behaves like an array of 8 x 16 switches. When a keypad (switch) is touched, a unique code number is sent to the computer, where a suitable program can assign both a position and meaning to the keypad. Several adjacent keypads can be given the same meaning or concept, as far as the program is concerned; the meanings can be changed during the time a program is being used.

In use, the keypad meanings are printed on a sheet of paper (A3 or A4) which "overlays" the Concept keyboard, so one keyboard can be used in an unlimited number of ways. For example, the overlays may use

1....colour patches, shapes, ideograms
This type of overlay has been used with retarded children at a pre-language level

2....pictures, for word-picture mapping in European languages

3....Single words - the week's vocabulary, or theme words

4....part words and word-endings

5....phrases or parts of speech

6....alternative alphabets, letter cases, word-processor control codes, accented letters

7....action-reading, in which movement can be detected and converted into a story

My second special device is a Votrax Type 'n Talk speech synthesiser, which is capable of unlimited English vocabulary with at least 95% accuracy. This device was first used in education to facilitate computer interaction with people who were sight-and hearing-impaired. My concern has been to use it to provide additional auditory information to pre-readers, or for pupils with reading problems, to reduce the need for printed information on the TV/monitor.

Some applications of Vortax include the auditory reward on successfully spelling a word (some dyslexic children were correctly spelling words in a computer game (STARSPELL), but kept asking their teacher to say the word), saying words as entered in a creative writing program (TOUCH WORD), using dissonance to draw attention instantly to spelling mistakes, and as an auditory prompt to complement a printed word in a word-picture matching exercise (WORDS & PICTURES)

I tend to use both devices at once, in certain circumstances opening up the possibility of computer communication for children at a pre-reading age. The best example of this is a program (AFARMER). Using a Concept keyboard with pictures of the farmer, farmer and chicken, boat, etc, and with Vortax to provide auditory prompts and confirmation of chosen option, an average five-year old can solve the strategic problem of getting a farmer, chicken, dog, and bag of grain across a stream in a small boat. The original Primary Schools introductory program, called FARMER, demanded a reading age of about seven years to decipher the instructions and options - an unnecessary language barrier to a simple logic problem.

I want to put forward two points about the "shape" of microcomputers.

They need not use only the QWERTY keyboard to feed information in, or visual devices to get information out, but can use a varity of currently available devices.

It is possible to use these devices with home and schools computers to allow language interaction at a number of levels not easily available otherwise, for example with pre-readers; thereby increasing the scope for language teaching.

Alan Shaw
Everton High School
Blackburn

NOTES

STAR Microterminals Concept Keyboard
22 Hyde Street, Winchester
Hants SO23 7DR

VOTRAX Type 'n Talk
Cyber Robotics
1 Ditton Walk
Cambridge

STARSPELLBBC computer
Griffin & George

WORDS AND PICTURES, TOUCH WORD BBC computer
BBC PAGEsoft, 17 Pagefield Crescent
Clitheroe, Lancashire

AFARMER BBC Computer
Mike Doyle, Ravenscliffe Centre
Ravenscliffe Drive, Bradford

FARMER Microprimer Pack BBC, Spectrum, RML computers
Tecmedia, 5 Granby Row, Loughborough

* * *

Output devices - the interactive video

What is interactive video?

In terms of actual hardware, it comprises:

1. A micro-computer.
2. A standard disc-drive or cassette recorder for loading the program.
3. A video recorder or a video-disc player.
4. A simple interface linking the computer with the player.
5. A standard T.V. monitor.

The following three projects, which are underway at Brighton Polytechnic, were demonstrated, using the video-disc player:

1 "Treasures of the British Crown": a BBC production adapted as a pilot program for the teaching of EFL.

2. "Dès le Début": a BBC beginners course for adults learning French.

3. "Bid for Power": a BBC package designed to teach business and commerce (EFL).

At the present time, the development of interactive systems is in its infancy. Progress is inhibited not by lack of knowledge but by the necessary finance and time to prime the writing and testing of programs. Initial experimental work has, however, proved entirely positive, in particular from the user's point of view, and over the next few months we obviously hope to further this research and collate the information.

How the interactive system works:

The student or user is presented with material in the form of a television sequence. This is then stopped by the computer at the appropriate moment, and the user is set a number of tasks to test and/or to reinforce the key points s/he has just seen and heard. Dependent on the student's reaction, a number of responses are instigated by the controlling computer program using relevant excerpts from the television material. Due to the random-access nature of the laser disc, these excerpts are summoned up by the computer and appear on the screen almost instantaneously - the main advantage of video disc over video tape. In this way the learning situation can become highly active, with the student involved in a variety of communicative activities, based on strengthening the skills of listening and speaking, in addition to the acquisition of vocabulary.

Cathy Watts and Angela Pickering
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THE AUTOTUTOR: Interactive video for language learning

1. Description

The AUTOTUTOR is an intelligent controller that interfaces with (i) a BBC Model B microcomputer with disk-drive and running MICROTEXT, (ii) a U-matic or VHS videocassette recorder, and (iii) a modified RGB/PAL colour monitor or a domestic colour-television receiver. In this configuration the AUTOTUTOR creates a low-cost interactive video system with which learning materials can be produced without recourse to video editing and - thanks to MICROTEXT - without learning a computer language.

MICROTEXT is an authoring language developed by the National Physical Laboratory, Teddington, England. Bevan and Watson (1983) describe its structure as follows:

> The over-riding design aim of microtext is to make simple things simple to do, so that an author can in a few minutes learn how to set up a simple branching presentation. At the same time microtext incorporates a wealth of more sophisticated features so that as an author gains experience he can implement more complicated applications tailored to specific needs.

> Microtext has been designed to allow the author to concentrate on the content and flow of his material, and the authoring process is centered around editing frames of text on the screen.
>
> Microtext has diverged from many other authoring languages in attempting to make ease of use rather than ease of implementation the ultimate criterion for system design. The end result is a pragmatic compromise with a simple and concise syntax for the most frequently used facilities, complemented by plain-language commands to exploit specialised features.

To this, it should be added that MICROTEXT enables the user to exploit to the full the excellent high-resolution colour graphics that are a feature of the BBC microcomputer.

2. Background

It is possible to approach interactive video either as a means of enhancing computer-assisted learning programmes or as a means of giving an interactive dimension to video learning materials. The AUTOTUTOR was developed from the latter standpoint as part of a larger research project in self-instructional language learning.

Video has much to contribute to the development of second/foreign language learning materials. In particular, it offers the means of providing the learner with input that locates the spoken language in a precise and visible socio-pragmatic context. In principle, many different kinds of video materials can provide the language learner with useful input, but they need to be presented to him in such a way that he can draw maximum benefit from them. As far as self-instructional learners are concerned, it is clearly possible to draw up written instructions and exercises to be used with video materials. But this approach has the considerable disadvantage of an operational disjunction between the video and the written medium. In other words, the learner has to derive from one medium his instructions for the operation and exploitation of the other. At best this means that the learner's concentration on the source of input is likely to be broken every time he turns to his written instructions or exercises; at worst it could lead to confusion, impatience and demotivation. The AUTOTUTOR makes it possible to present instructions and exercises through the same medium as the input and at the same time to give them a genuinely interactive character.

Perhaps the two most significant developments affecting language teaching/learning in the past ten years have been (i) the emergence of the so-called communicative approach to the design of syllabuses an learning materials and (ii) the advent of relatively inexpensive microcomputers to aid the learning process. All too often teachers and course writers committed to the communicative approach have tended to dismiss the computer as having nothing to offer the language learner; while too many of the learning programmes developed for computers have shown little awareness of the new insights into language learning provided by research associated with the communicative revolution. The AUTOTUTOR provides one

means of trying to heal this breach. Self-instruction cannot ignore the potential of the computer as a learning tool; yet as long as the focus is on spoken language it is doubtful whether, in the present state of technology, the computer on its own can assist the cause of communicative language learning to the same degree as interactive video.

3. Creating learning materials with the AUTUTUTOR

A description of how the AUTOTUTOR is used to create learning materials is also the clearest way of explaining some of the things it can do for the learner.

The first step is to select a video recording and to use the AUTOTUTOR to divide the video into learning segments of a length appropriate to the pedagogical purpose that the video is intended to serve. Note that it is not obligatory to use the whole of the selected video recording; the AUTOTUTOR can be programmed to use only those parts that the author requires.

Having segmented the video, the author has to decide whether the segments are to be presented to the learner in the order in which they appear on the video recording or in some other order. Two factors have to be taken into consideration here, one linguistic/pedagogical and the other operational. First, if the original order of the video material is changed, the comprehensibility of the video segments may be adversely affected as the context progressively established by that order is undermined. Secondly, a re-recording of video segments will necessitate more spooling backwards and forwards, which of course takes time. The AUTOTUTOR is capable of spooling the videotape at the same time as the learner is interacting with the microcomputer; but the more changes the author makes in the original order of the video material, the greater the ingenuity he will need to exercise in order to create a programme that runs continuously, without any of those embarrassing pauses that are characteristic of the less powerful microcomputers used in education and training.

When the order of the segments has been determined, the author has to decide how each segment should be presented to the learner. For example, he may want the learner to view the segment before being presented with any information about it; alternatively, he may want to begin by providing the learner with a focus on the segment - by telling him what to watch/listen for, or by giving background or contextual informational.

When the author has provided for the learner to see the segment - once, twice, or as often as the author determines; with or without introductory material presented through MICROTEXT - he then has to devise an appropriate interactive routine. Clearly the mode of presentation will depend on the author's pedagogical purpose, which will also determine the kind on interactive routine he will use. Essentially this routine is built around two forms of learner response: (i) the learner can be presented with (say) a series of statements about the segment and must say whether each statement is true or false by using two keys (perhaps Y[es] and N[o], or T[rue] and F[alse]); (ii) the learner can be asked an

open-ended question to which he responds via the keyboard. MICROTEXT is so structured that the author can determine not only what elements are essential for a correct/appropriate reply to the question but also what kind and degree of error should be allowed in the learner's reply.

Finally, the author has to decide what to do at the end of the segment if the learner performs the interactive routine unsatisfactorily. For example, he may want simply to give the learner the right answers; or he may want to take the learner back to the beginning of the segment and present him with a further introductory/focussing information; or he may want the learner to view the segment again and then follow a different interactive routine.

4. A network of experimental users

The AUTOTUTOR challenges the view that interactive video materials cannot be produced on a "cottage industry" basis (Duke 1983). Indeed, its development was undertaken precisely in order to put applied linguists and language teachers in the position of being able to experiment with interactive video as an aid to language learning. In order to begin a systematic exploration of what this version of interactive video can and cannot offer the language learner, it is proposed to establish a network of experimental AUTOTUTOR users. Members of the network will have an established interest in the use of microcomputers and/or video in language learning and will be committed to a regular exchange of information. The network will exist under the auspices of AILA's Commission on Educational Technology and Language Learning and its activities will be reported in System.

David Little
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Ireland

References

Bevan, N. and Watson, P: The design and evaluation of a microcomputer-based authoring system for trainers. In Proceedings of the IFAC/IFIP Conference "Training for Tomorrow". Leiden, 1983.

Duke, J: Interactive Video - implications for education and training. Council for Educational Technology. London, 1983.

CALL, in France: the current state of the art

By 1986, 100,000 micros should be available in French primary and secondary schools. The 8-bit micros currently in use till 1984 will be replaced at the same time by bigger 16-bit machines and by home computers. Networks will be organised with a bigger computer linked to several home computers. The professional 16-bit computers will allow the use of Diane, the new standard for the writing of CAL materials designed with the support of the "Agence De l'Informatique". Diane will make courseware transferable from one type of machine to another. Plans also include the use of 5,000 videodiscs. All hardware bought within the official plan and paid for by the "Ministere de l'Education Nationale" is, of course, French (Bull, Léonard, Logabax, Thomson ...)

Twenty-five centres have been opened in Universities so as to provide the necessary training for teachers. They organize year-long full-time courses for people who will then train their colleagues for shorter periods (100 hours), write courseware or co-ordinate the use of computers in their schools. Training sessions give more and more emphasis to the pedagogical use of computers as opposed to the sole teaching of one or several programming languages. The "Centre National de Documentation Pédagogique" receives all courseware officially designed and is in charge of checking it and making it available in all schools.

As far as CALL is concerned, little courseware was created in the first experiments. Several drills, conjugation exercises, multiple-choice tests were then turned into courseware. Current developments are fairly similar to what can be seen in Britain: games, word processors, simulation. A more original trend is the design of proper teaching materials written with the help of sophisticated author languages, e.g. Arlequin.

Such courseware has been designed on a large scale at the University of Paris 7, where first experiments in CALL (English for university students) started in 1969 at the OPE centre. Work has since then turned to secondary education and is now carried on within the ORDI team, in which a university researcher works with several secondary schoolteachers. Three lines of work are followed: research on CAL, courseware writing, training in CAL.

The work is connected to fundamental research in linguistics and to research on language teaching. The teaching methodology chosen is analytical : learners are presented with basic linguistic concepts, and comprehension and production activities are closely linked to an understanding and explanation of the basic mechanisms involved (in the field of determination, aspect, modality ...). Work on isolated words is avoided. Examples are inserted into meaningful situations with the various characters clearly located (use of speech-bubbles, characters facing each other on the screen...). In many cases, exercises or lessons are built around a story with the same characters and situations used all through the work. Grammatical analysis is systematically connected to what the structure studied is used for in discourse.

A detailed study of what a CAL situation is, led to specific choices and an original methodology exemplified in the various projects under way.

Great importance is given to individualization via detailed treatment of answers and use of variables and tests so as to multiply pathways through the materials. The learner never has to read long blocks of information passively. Any new item presented is immediately checked and practised through various activities.

By 1985, the team will have produced more than 40 hours of courseware for microcomputers. Two projects were presented from examples. The first one is a "Parcours grammatical" composed of short grammer revisions followed by sets of application exercises, in which the learners must create full dialogues and answer with complete sentences. The second one is aimed at more advanced learners and offers proper grammer lessons with thorough treatment of the point concerned and associated with various exercises at each step.

Future developments include an adaptation of some of the courseware for home computers, the use of audio-visual aids and an approach integrating the various exploratory paths learners may wish to follow, in more detail.

Françoise Démaizière
Département de Recherches Linguistiques
University of Paris VII

Descriptions of programs demonstrated and talks given by participants

EXCHANGE PROGRAMS N.Y.C.A.L.L.

WORDSHOOT by A. Smith of Sheffield. Five or six alternative spellings of French words appear on an attractive screen lay-out. By moving a combination of four keys the user locates the correct spelling and knocks it off the screen. If the wrong word is chosen or the time limit elapses, only the correct word remains.

LAHNHOF by Alan Taylor of York. A photo type role-play program with attractive graphics which takes the user through the various stages of buying a ticket at a German railway station. The users are prompted to elicit and supply all the associated information (in German): time, platform, price etc. There is no typed input.

CO..PDEN by Alan Taylor of York. This invites the user to put in two main clauses which they wish to combine to form a complex sentence (main clause plus subordinate) along with the conjunction to be used. The sentences are rearranged on the screen, using colour to focus attention on various parts of speech.

DEFENCE adapted by J. Pugh of Harrogate. A game with simple but humorous visuals which allows pupils to spell and practise numbers in French. There is a choice of numbers from 1 to 20 or from 5 to 100 in fives. Slightly different versions exist in German, Spanish and Russian.

These are just examples from our list. Some are available on an exchange or purchase basis. These programs are for BBC.B microcoputer.

The N.Y.C.A.L.L. Group consists of some five Modern Language teachers, who meet about once a term in York.

Our aim is to produce elementary but useful programs in German, French, and eventually, Spanish, for use in C.A.L.L. We have made exchanges of programs with colleagues in other parts of the country, and although we prefer to operate in this way, the programs can be purchased as well (see below).

They are not polished commercial products, but designed to stimulate interest, and give teachers programs to experiment with.

We have exchanged programs with:

Mr J.A. Campbell, Head of Modern Languages, Aderdeen College of Education, Hilton Place, Aderdeen, AB9 1FA

Kathy Stones, Advisory Teacher, Hertfordshire Computer Working Party, c/o County Hall, Hertford, SG14 8DF

Mr E. Bridgewood, Doncaster Educational Computer Centre, Beechfield Teachers' Centre, Chequer Road, Doncaster, DN1 2AF

Only they distribute their programs.

Details of the N.Y.C.A.L.L. group's programs, some twenty in all, which are available on BBC discs and, in some cases, on 380Z and PET discs and/or cassettes, can be obtained from Richard Beaton, Ripon Language Centre, The College, College Road, Ripon, HG4 2QX. Send an s.a.e.

Richard Beaton
Ripon Language Centre.

HERTFORDSHIRE CALL PROGRAMS

WOHIN (BBC:B) — Pairs of "wo" and "wohin" sentences are displayed on the screen. Pupil to select the correct form of the definite article. Help pages are available.

GUESS (BBC:B) — Two sentence-completion exercises based on Level I of the Hertfordshire graded tests in French. The gaps in the text are to be filled by typing a suitable word or phrase. If the pupil's response is registered as an error the automatic prompt provides the next letter of the word.

MEUBL 1 (BBC:B)	Based on Level 1 of the Hertfordshire graded tests in French. Pupil to empty a removal van of furniture by typing the name of the next item to be removed. Removal of an item from the bottom of the pile is a popular pupil choice!
MEUBL 2 (BBC:B)	Sequel to MEUBL 1. The removal man asks the house owner (pupil) in which room the furniture should be placed. Pupil types appropriate phrase, e.g. Dans la salle à manger.
DETECT (BBC:B)	A classroom language-activity that engages the pupil in dialogue, promotes class discussion and lends itself to oral and written exploitation in the foreign language. The pupil assumes the role of a detective and, by questioning a number of people, attempts to discover the cause of an accident in the Place St Michel.
BURGUN (RML 380Z)	A data base on Burgundy (Hertfordshire's link area), runs on a Micro Query. Data on agriculture, industries, local specialities, buildings and places to visit.
BURGMP (RML 380Z)	Program developed to help pupils with map completion exercise for CSE Mode III French Studies examination (S/29/14/FS).
VBNOUN (RML 380Z)	Files of verbs from which the pupil types in what he thinks is the corresponding noun, and vice-versa. If corrent, the word appears in the context of a sentence as a reward.

The above programes have been developed by a working party of Hertfordshire modern language teachers in co-operation with programmers from the Chiltern Advisory Unit, Hatfield.

Further information may be obtained from Trevor Allin, Advisory Teacher for Modern Languages, Education Department, County Hall, Hertford SG13 8DF.

AECAL and NON-AECAL Computer Programs Developed at the University of Dundee

INTERPRETER is a package which requires a BBC Model B Microcomputer with single disk drive and TV monitor, and the Tandberg Computer-Controlled Taperecorder (TCCR). With INTERPERTER the teacher can construct exercises which simulate the situation of the interpreter. The learner is invited to act as an interpreter for, say, two people who are conducting a dialogue and are unable to understand each other's language. In a typical exercise the learner would hear a question, type into the keyboard his

translation or interpretation of that question into the listener's language, and so on for the reply. The computer will scan each translation for key words which it will expect to find in a minimally communicative version, printing up on the screen for the learner's reference those key words which it has not found. It can also, incidentally, display cues, extracts or key items from the passage to be translated: these cues may take the form of mnemonics or actual help-notes, if required. As a rule, however, the idea of the exercise is that the learner only hears the material to be translated from the tape and does not regard it as a written translation-exercise. There is also a facility, if selected, for putting the student under either strong or moderate time pressure (thereby simulating real conditions of interpreting). The teacher may construct or pre-record a tape of virtually any length and of any grade of difficulty for use in the package. He is, moreover, free to stipulate the cues and keywords he feels are appropriate, controlling how specific or how general they are, depending on the degree of grammatical accuracy and the depth of vocabulary required. Once an exercise is set up it can be used repeatedly by the students without teacher intervention.

An essential part of the design concept is that the computer does not react to the learner on a straight "right answer"/"wrong answer" basis and that the exercise has absolutely no resemblance to structure drills. The intention is to incorporate the computer into open-ended and communicative language work at the more advanced level and thus to exploit fully the potential of the audio component.

Version 1.0 of this package is now available for all major European languages (including Russian and Scandinavian languages). All the teacher has to do is pre-record a tape of an interview or dialogue, type in the cues and keywords into a utility program, and hand the exercise over to the student. Planned improvements to the first version will include facilities for the teacher to arrange translation keywords, and key phrases hierarchically and to store the learner's performance for assessement purposes. Research is also under way to develop further the component which analyses student input in order to make it more sensitive and helpful to the learner.

Another development is the CONTEXT RECOGNITION program which presents the learner with a screen of text in which two words or phrases have been transposed. At the same time the learner hears the original text on the TCCR. He or she has to pick out the two items which are transposed and the program will then re-order them, asking if this version looks right. The text on tape and on screen can be either in the same language or in two different languages, and the difficulty of the task can range from very easy to extremely hard. It is up to the designer to aim the text and the transpositions at the learner's ability. The tape is prepared as normal for AECAL tapes and a support program for cataloguing the "audio blocks" on the tape is available. The text itself is prepared with a word processor, and the phrases to be transposed are marked. Another support program (supplied as part of the package) is then run to prepare the files for the main program to work with.

It is hoped that what these packages will show, is that the most exciting thing about AECAL is not the mere technical innovation, so much as the

opportunity it presents for removing the focus of attention away from the microcomputer itself and bringing computer-assisted language learning back into the realm which many teachers may find more akin to language learning techniques in other areas.

Further programs/packages demonstrated which do not have the AECAL audio component include the following:

CONTEXT: In this routine, designed to enhance the learner's inferencing ability, the teacher types in his own text of up to 50 lines. These are presented to the learner with missing words to fill in according to a gapping frequency which can be set at the beginning of the exercise. Two modes are available: either the text with gaps is presented with rolling screen facility so that the learner can at any point examine the full-text context or only the left-hand context is presented so that the learner builds up the text phrase by phrase. Clues can be requested, and, at the end, a final assessment score is given. Context is available with various European or Cyrillic character sets.

1. WHAT DOES THE CONTEXT PACKAGE DO?

Drawing on the experience of language teachers and on recent advances in computer-assisted language learning techniques, the CONTEXT package will enable the teacher to produce text-based language exercises which should prove absorbing for language students of all levels, from beginners to advanced, and also give the teacher complete freedom on input material.

With the CONTEXT package and no knowledge of computer programming you can write texts in any of the major European languages (English, German, French, Italian, Spanish, Russian or the Scandinavian languages), at any grade of difficulty, on any subject, in the form of prose, dialogue, or even poetry if you wish, and use them for the following types of language learning test or exercise.

CONTEX1: Selecting a gapping frequency within the range of 2 and 20, every Nth word of the text will be omitted on the screen and the learner invited to type in the missing words one at a time. The learner can summon a clue for each word, is given no restriction on the number of attempts and can scroll the full text up and down to scan for context clues (the maximum text length is 50 lines). If he gets any part of the text correct, this is displayed to him for his next attempt. At the end of the session he is given a percentage assessment score.

CONTEX2: Selecting a gapping frequency as before, the learner is given only the left-hand part of the text before the word he has to deduce and must therefore build up the full text phrase by phrase. Since only the left hand context is available to him he can summon a series of clues for each missing word, consisting of, initially, the length of the word and, thereafter, each missing letter in turn. At the end of the session he is displayed a percentage score based on the number of clues summoned per correct answer. As in the previous exercise the learner is told when part of his answer is correct before the next attempt. Study of learners' performance at this exercise indicates that there is usually a point during the clue-summoning process at which the student suddenly perceives

the likely answer - this perception will depend on the exercise his knowledge of the morphology and syntax of the language and his depth of vocabulary.

The fact that, in both of these exercises, the gapping frequency is outside the control of the teacher is deliberate and derived from research work in the field of English as a Foreign Language which showed that a random or fixed frequency affords a far superior test of overall reading competence. The learner is unable to deduce the type of word from anything but the linguistic clues in the text itself and is not bored by any detectable bias towards particular parts of speech: the predictabilty of structuralist language lab-type exercises is thus avoided.

GERMAN SENTENCE BUILDING: The learner is presented with a series of words and phrases which he has to arrange in an order which will constitute a valid German main clause and provides maximum flexibility by accepting any valid word order. Mistakes are explained on screen and an auto-correction facility rearranges incorrect word order. To aid the student unfamiliar with the keyboard, all input is by single-key presses and a help screen is always available. A special feature enables the teacher to input his own words to build into a sentence.

FRENCH PRONOUNS PROGRAM: This flexible routine enables the learner to explore and experiment with French direct and indirect object pronouns. The substitution of pronouns for nouns is demonstrated on screen, with particular emphasis on the resultant shift in word order. The learner can either watch a demonstration, look through the rules for substitution and word order, test himself, or run his own demonstrations. The utility operates at five different levels, from single pronouns in the present tense, to pairs of pronouns in the present and future, pronouns in direct and indirect commands, and pronouns in compound tenses.

TRANSLATION PROCESSOR: This program gives the learner a screen split into three parts. In the top part he sees the source text to be translated and can scroll through it at will. In the middle part is a window in which the translation is composed in the target language. Full text-editing capabilities are available in this window. The lower part of the screen is devoted to the look-up function. A limited number of phrases in the source text is held in an online glossary, and the learner can call up suggested translations for these more difficult phrases. These suggested translations appear in the bottom part of the screen and can be easily transferred to the target text. This is designed to move the learner away from word-for-word translations of difficult phrases, idioms, etc. The program supports character sets for all major European languages, including Russian, and the size of source and target windows is adjustable. On the basic computer there is space for up to 4000 characters in each text, but on a second processor this would be considerably increased. This program is still under development.

AECAL = Audio-enhanced Computer-assisted learning

Derek Lewis, Department of Modern Languages, University of Dundee

Editor's note: Some of the above programs are available commercially from Lochee Publications Ltd., 5 Inverary Terrace, Dundee, DD3 6BS, Scotland. They are for BBC Model B only.

LOTHIAN CALL PROGRAMS

PROGRAM NAME: Im Reisebüro

AUTHOR: Peter Kershaw, Wester Hailes Education Centre, Edinburgh.

MACHINE: Apple II 48K

LANGUAGE: Apple Pilot

FORMAT: one floppy disk

AVAILABILITY: By arrangement

SHORT DESCRIPTION: The program is set in a futuristic tourist office in Hamburg, where the computer has taken over!! The student is faced with a series of drawings (more or less accurate, but recognisable to a Hanseat or seasoned user of Vorwärts) and must extract information from the machine by asking questions in German. The program accepts a large number of approximations, and is quickly exhausted by inquiring teachers (less quickly by students!). It can be used at various levels of ability, as up to fifteen questions have been pre-programmed. It is very easy for a teacher who has a nodding acquaintance with Pilot to add extra responses.

PROGRAM NAME: Au Voleur!

AUTHORS: D May, Whitburn Academy
L Hamilton, Dean Education Centre (BBC Program)
Peter Kershaw, Wester Hailes Education Centre (Apple program)

MACHINE: BBC Model B
Apple II 48K

LANGUAGE: BBC BASIC
APPLE PILOT

FORMAT: BBC - disk and cassette
Apple - disk

AVAILABILITY: By arrangement

SHORT DESCRIPTION: A kind of adventure game set in a French town. The student goes to the bank to change some money and the money is subsequently stolen. The student spends the rest of the program chasing the money or the thief, aided or hindered by various people he/she meets. The BBC version will also print out the text of the story the student has seen, and provide him/her with a list of questions in English on his story. This option is not available on the Apple, due to the structure of Apple Pilot.

PROGRAM NAME: Quelle heure est-il?

AUTHORS: C. Wrightson, St Kentigern's Academy, Blackburn
I Millar, St Kentigern's Academy
C Maclean, Dean Education Centre

MACHINE: BBC Model B

LANGUAGE: BBC Basic

FORMAT: Cassette (also disk, but not as present)

AVAILABILITY: By arrangement

SHORT DESCRIPTION: This program is a game-style practice program in telling the time in French. There is no end to the program if the student continues to give the correct answer - but each time he/she gets an answer wrong, one of his helpers loses his life (noisily!). The pupil does not need to type in the various words necessary for the answer because they are displayed at the side of the screen. The pupil selects the words he wishes to use by moving the helper up and down the screen by means of the movement keys.

PROGRAM NAME: Class-use disc

AUTHOR: Peter Kershaw, Wester Hailes Education Centre

MACHINE: Apple II 48K

LANGUAGE: Apple Basic

FORMAT: Diskette

AVAILABILITY: By arrangement

SHORT DESCRIPTION: A suite of various programs which have been found useful with first- and second-year classes, ranging from simple vocabulary drills to a time program, and program about directions. Some entertainment included!

Please note that these programs are at the final stage of preparation as part of a Lothian Region CALL package which should now be available (with documentation). Further programs are under development, and it is intended that these will form part of the same package.

Peter Kershaw
Wester Hailes Education Centre
Edinburgh

PAGE CALL PROGRAMS

1. TELEX. For business simulations. Telex-sending and -receiving simulators in French, German and Spanish. Messages stand as files on disc. Reader program for teacher to produce hardcopy for students later.

2. IMAGINARY DATABASE. On products and facilities, to use in role-play/simulations where students deal with foreign customers.

3. DICTATION. Interactive dictation in English, French, German and Spanish. Each word is checked; up to two incorrect inputs, then correct word is printed. User may playback current phrase at any time; score given and text processed.

4. DICTATION AUTHORING PROGRAM. Input text, automated recording of text, constant error-trapping and creation of files for use with DICTATION.

5. GAPFILL. Sequential gapfill program, with words replaced by single asterisk. Text is reprocessed as word is input; up to two incorrect inputs; current phrase may optionally be played back at any time; synchronised display of whole text and recording. Help-option available.

6. GAPFILL AUTHORING PROGRAM. Input text, help messages, automated recording of text, constand error-trapping, and creation of files to use with GAPFILL.

7. CLOZE TEST. Able to use GAPFILL files and recordings; similar input procedures to GAPFIL, but no help-messages.

Programs 3 to 7 use Tandberg TCC[illegible].

Alan Page
Luton College of Higher Education

The use of the micro in the classroom.

This paper is a background and discussion document based on the Lothian Region video made by Jacques Chézaud, our Lady's High School, Broxburn at Craiglockhart Campus of St. Andrew's College of Education. The stimulus for the video came from the Microcore group, represented at the conference by the Convener, Peter Kershaw, Western Hailes Education Centre, Edinburgh.

The paper needs to be set in two contexts: firstly the contents of the video sequence, which lasts about 25 minutes, and secondly the concerns of language teachers in Lothian in particular and Scotland in general. To deal with the language teaching context first, it is probably well-enough known that Lothian has been in the forefront of the movement towards graded tests based on communicative competence in the foreign language: CILT have published material emanating from the "GLAFLL" working parties. The national certification system in Scotland is currently in a transitional phase, and it would be fair to say that the new "Standard" grade exam, (roughly equivalent to 'O' level), is a "communicatively based" exam. The salient fact that affects CALL is that for most pupils no written foreign language element is envisaged: there is to be an

optional written paper for "Credit" level students, but most pupils will be examined only in conversational language and comprehension.

The video sequences are based round that well-known theme of language-teaching computer programs: telling the time. No claim as to the quality of the computer program is made: indeed, one of the contentions of this paper is that the criteria for judging CALL software depend on many more variables than might at first meet the eye. The video falls into two parts, both parts from the same sequence of lessons but not necessarily on consecutive days. The group of pupils is small: these are teacher lessons whilst the rest of the class is with the "assistant". The first sequence shows the class working as a class with the teacher working the computer. No pupil has any "hands-on experience" in this part of the lesson. The second sequence shows the class divided into two groups. One group works with the computer, one group works on worksheets, whilst the teacher alternates between the groups.

The video was originally produced for an in-service training day looking at the potential of the micro-computer in the language classroom. Neither Jacques nor I would claim that this is the only way to use the micro in school, but we feel that the video leads the discussion into interesting fields. All too often, discussions of CALL are dominated by software, but we see a need to advance the discussion on two fronts: the methodology of CALL is just as important.

A brief mention of Microcore's activities on the software side is called for here. Like many "user groups", we began as a group concentrating on writing software, but now we see the role of teachers as being writers of specifications: designing software to be written by professionals. We now have a link with SMDP (the Scottish equivalent of MEP), and are producing a suite of programs.

Moving from being amateur programmers to professional educators specifying what we want programs to do has been of great benefit to the group. It allows us to concentrate on the educational aims of what we are doing, instead of having to keep half an eye on the limitations of our programming skills. So we can keep asking the important question: how is this program going to contribute to the language learning process? There has been a certain amount of discussion in the group as to whether we need to look again at the kind of software we are specifying: how we specify programs which are for individual use, how we consider programs for groups and whether the two are incompatible.

The focus of this workshop is "learner/machine interaction" and I believe most teachers see the key-word here as being "interaction". If we look realistically at the situation in schools the prospects for the forseeable future are somewhat bleak for the individual use of the micro. Computer Studies is an expanding field; TVEI and 16-18 Action Plan Modules (or their English equivalents) also can make large demands on the relatively small numbers of computers in schools. And looking at matters in a Scottish context, the fact that voice recognition is a long way away (even the recently established research project at Edinburgh University funded partly by Plesseys is looking at least six years into the future before they produce worthwhile results), coupled with the absence for most pupils

of writing as an examinable skill, is another stimulus to look away from the more traditional one learner - one micro set-up. The Lothian Microcore is focusing more and more on software which is as flexible as possible: software which can be used most profitably with groups, as a stimulus for group interaction. We think that the video points in directions which will enable us to use the micro to enrich the education experience of the students in the foreign language classroom.

After these general points, I should like to focus a little more closely on the actual content of the video. The points I raise here are points which have emerged in discussions about the video in the Region. The first interesting point is to ask what is actually being taught in the video sequences. The subject of the computer program is telling the time, but it is fairly clear that much of the work on telling the time is revision and reinforcement. One of the points that emerges from the lesson is an emphasis on spelling correctly, but I do not think anyone would claim that spelling is really being taught. It is, of course, difficult to look at one part of a sequence of lessons in isolation outwith the sequence, but what the video shows really well is pupils engaged in communication: using the foreign language because that is the "natural" thing to do. The computer stimulates this because the majority of the screen-displays are in the foreign language, and it has emerged that this is an important way in which the micro contributes to language learning. The pupils are not focusing on learning the language but on using it: the computer helps this to happen by making their immediate environment more "French".

The next question to ask is, of course, what are the consequences of this for software design. We do not really have many firm answers to this, as we are only just beginning to make our specifications reflect this approach to CAL. We see ourselves here as integrating the computer into the "communicative" methodology which has already been developed, rather than developing a new methodology to cope with the computer in the language classroom. This is not to deny that the computer offers new possibilities, and we hope that some of our programs will explore these. One immediate point is that we intend to ensure that all screen displays that the pupils will see will be in the foreign language.

The point, though, is that virtually any kind of language software can be used in this kind of classroom context. The role the program is playing is in focusing the overt attention of the class, and possibly in adding a "game" element to the learning process.

Given a free choice in materials, we would choose a more "open-ended" kind of software: programs where the computer acts as stimulus to group discussion, or perhaps as an arbiter in discussion. It can also introduce a certain random element, providing a certain amount of "controlled unpredictability". There might, for instance, be a program simulating a shopping expedition in which a group has to make decisions about what to buy. The screen displays can be very simple: just a series of "shop windows" with items to buy. No foreign language input is necessary: the learning experience is not the interaction between the learner and the computer but the interaction between the group of learners, and perhaps between the learners and the teacher.

We do not deny the possibilities of computer-based drill-and-practice programs for individual use, but we think that the possibilities shown in this video point the way to a more effective use of the micro in the language classroom given the constraints which I set out at the beginning of the paper.

Peter Kershaw
Jester Hailes Education Centre
Edinburgh

Computer-based Exercises for Learners of German

The aim has been to develop exercises which exploit as much as possible the specific advantages of a computer program over other media, such as books, for example flexibility and responsiveness and, to a certain extent, one could also mention portability here. Of course, books are portable, but cannot, without previous electronic coding, have been transferred via 'phone wires or per satellite.

More specifically, portability of a computer program means that it can be run on many different computer installations. This is generally achieved by the use of a fairly standardized high-level language such as Pascal. Total portability is, for evident reasons, non-existent; a program which on a supercomputer takes weeks might as good as never finish on a micro, even if it could be easily adapted. Terminals do not all have screens 80 columns wide and 24 lines long; they also differ widely in special effects, such as the availability of underlining. Useful compilers usually implement supersets of the language, with some features difficult to resist, provided one can assume they have an equivalent or can be circumvented in other implementations. It is a matter of discretion which compiler or screen-specific features one decides not to reject. Amongst micro-computer Pascals, the UCSD implementation seems to have set a kind of standard which the more recent implementations seem to largely follow. This quasi-standard is confirmed by the recurrence of certain of these features (e.g. string handling procedures) in the libraries of the direct successor to Pascal, Modula-2.

A major limitation, in the portability of the programs under consideration, might be insufficient memory in the target machine. Some of the programs might go beyond the memory available on even the larger 8-bit micros, say 48 or 64k. There is no definite answer to this; it depends very much on how dense a code the compiler writes. If the code exceeds the available memory space only slightly, there are several remedies: the simplest is to cut down the size of the vocabulary file read into the program. Since Pascal, in principle, allocates memory at compile time, this means that a few parameters (probably one only) have to be altered in the source file. In extreme cases, a module such as the checking of the screen-handling procedures, might be sacrificed; the gain will, however, only be in the area of about 2k; yet this might just be enough. In view of the wide range of efficiency of compilers and the variance in clock speeds (from, say 2 to 8 Mhz), it is almost impossible to say whether the response time of one or the other program might, in adverse conditions, become unbearably slow, especially if the compiler

compiles to intermediate code only. It is, however, likely, that in such cases a more efficient compiler is available for the machine. These considerations, of course, concern only portability between different types of computers, and not at all transfer between individual machines of the same type.

Unless one wants to limit oneself to multiple-choice type exercises, one of the difficulties with computer-based language exercises is a possibly insufficient typing skill on the part of the learner. There are several ways to obviate this, one being to let the computer produce virtually all of the text, either pre-entered or random-generated, and let the learner fill in only critical letters, such as endings. The learner is thus allowed little initiative, and has largely to follow the lead of the computer, which is not necessarily a bad thing. The method followed, in the bulk of the exercises considered here, is different; except for repetitive set-patterns the learner initiates the typing; once the program thinks it knows what the learner is going to type, the computer takes over; it can come to this decision only on the basis of the vocabulary in the vocabulary file, which, however, can be, memory-space permitting, extended ad libidum (since the vocabulary files are simple ASCII text files - not, for instance, Pascal 'typed' files - they are easy to manipulate, e.g. restrict or alter, even by rather inexperienced computer users). The decision-making process used is similar to the 'cohort' model of speech recognition described by Marslen-Wilson and Tyler (in 'The Psychological Mechanisms of Language', The Royal Society and the British Academy, 1981). It follows from the same principle that erroneous spellings are not accepted. Many, if not most, other errors, can equally be prevented, yet not all; thus 'Die Tisch' would be accepted in expectation of a plural ending; only once a space or punctuation mark is entered will an error condition arise; it would, in certain cases, such as this, be possible to prevent this, but only on the basis of the doubtful assumption that the learner thinks that 'Tisch' takes no plural ending, whereas it would seem more likely that he is wrong about the gender of the word. It seems therefore, in certain conditions, more prudent, just to mark an error condition once it has arisen rather than prevent it.

That the learner can only write formally correct sentences does not preclude his writing nonsense. This could be prevented, at great cost, by appropriate selectional restrictions; but it is felt that the semantic responsibility should lie on the learner's shoulders; if he or she chooses to write non-sense, why not? If he or she ignores the meaning, tant pis! It should be mentioned that appropriate parts of the vocabulary may be looked up while a word is being typed; if another word is then chosen, the word being typed may be cancelled.

At present, work is being done, and some exercises have been finished, though not tested in the technical sense, on nouns, above all plural formation, and, in conjunction, on adjectival declension. A dozen or so exercises of this type are projected; they should all be finished in a few weeks' time.

The next chunk will be exercises on conjugation, probably a similar number. Though the essential algorithms for this have been written some time ago, it is most likely that a detailed implementation will hold quite

a few nasty surprises; and some problems, like those connected with prefixes, have not yet been satisfactorily solved. Since experience has shown that it is always the nasty little things that present the most tenacious obstacles, it is difficult to give an exact date for termination; Summer 85 - early or late - might be a reasonable guess. It is hoped that valencies may be taken into account; this will however restrict the vocabulary to verbs treated in the Valenzlexikon by Engel and Schumacher, which deals exhaustively with the 'Grundwortschatz' (U. Engel & H. Schumacher: Kleines Valenzlexikon deutscher Verben, Gunter Narr, 1978). A tighter time-schedule may impose some restrictions. Valencies will, automatically, lead to the treatment of subordinate clauses which should not cause any major problems, and might, if one wishes to follow a less systematic way of proceeding, be treated separately.

To what extent these strands may be coalesced into more general phrase-building exercises will largely depend on what memory requirements one wishes to set. At this stage, it seems wise to delay a decision until the conjugation part is implemented.

All exercises are geared towards individual learners; for reasons of portability, and others, they contain no graphics. Their aim is to achieve a high through-put in relation to time. (Of the Power Law of Practice, in J.R. Andersen (ed): Cognitive Skills and Their Acquisition, Laurence Erlbaum, 1981)

All exercises are written for the Goethe-Institute, Munich, which holds the copyright.

Hanno Martin
Goethe-Institut
York

Validating and evaluating CALL on basis of the Hull program

0. Introduction

The following is a report on an experiment carried out in Hull during the academic year 1983/1984. The aim of the experiment was to gain some insight into the value of computer-assisted language learning in general. It was part of a larger project, which will last three years, so this is only an interim report. During the evaluation of the CALL-workshop in Lancaster in September 1983, many participants remarked that it was about time that someone attempted to evaluate CALL, in terms of both its overall purpose and the wide range of programs that have become available over the past few years. It must be stressed, of course, that this is by no means the definitive statement about CALL, because many aspects will not be touched upon. What we are concerned with here are the effects of CALL on the level of students' linguistic ability in a foreign language, but no attention is given to, for example, the quality of exercises. A survey of the various available CALL-packages could, and should, do that.

1. CALL at Hull

These days, CALL at the University of Hull happens on a Tandberg EC-10 micro-computer. The package consists of three parts, kept on separate floppy disks and programmed mainly in CP/M by Professor Rex Last of the University of Dundee and Mr Pat Crabb of Tandberg.

The three parts are: a creation disk, a user disk and a monitoring disk. The creation disk contains a program with which you can create and edit exercises as well as do such useful things as erasing, listing, etc. On the creation side, it allows you to do various things, for example, you can vary the number of responses possible to any one question, reveal the shape of the correct answer, suppress the difference between lower and upper case and work with a reinforcement panel.

The multi-user program can activate up to seven satellites to the microcomputer so that a maximum of seven students can be working on the same set of exercises. It can contain a maximum of 60 exercises, depending on their size, and offers them to the student on a simple menu. The students activate the computer by typing in their ID (consisting of three letters) and then the code of the required exercise. When typing in the reply to a question, the computer verifies this with the model answer on the user disk and gives immediate feedback, even if more than one student is doing the same exercise. In our exercises the students are given two opportunities to reply and if the second answer is wrong, the correct answer is given.

This is where the third part of the package, the monitoring disk, comes in. On this disk are registered:

1. each student's ID
2. the name of the exercise the student is doing
3. The responses to those questions which have twice been answered wrongly, plus the model answer
4. the final score of each exercise done

At the end of a session the teacher can obtain a print-out of the contents of the monitoring disk.

2. The beginners' course

For the present survey, I looked at students' performances in exercises for our beginners' course. In this course, we stick to a fairly rigid programme, based on Levend Nederlands: Een audio-visuele cursus Nederlands voor buitenlanders. The computer exercises are based on the ground covered in this course, so it seems only fair to outline as briefly as possible what the course consists of and what kind of exercises are presented to the students, before describing the experiment itself.

I always hope that students start their weekly routine at home, by looking at the lessons in the course book that are going to be covered that week, looking up words etc. Their first language-class is in the language lab, where they hear the dialogue to two lessons, discuss problems and, if there is time, do some conversation. This is followed by relevant drills

(stimulus-response or substitution) in the private-study lab. in their own time, which in turn is followed by a session of (computer) exercises. Finally, they attend a tutorial the next day where problems are discussed on the basis of the computer print-out from the monitoring disk. The computer exercises' function, therefore, is reinforcement rather than instruction. There are roughly equally large numbers of cloze exercises, rewrite exercises and translation exercises and also a few multiple-choice tests. The total number of exercises is 103, which means about five exercises to each lesson with 23 lessons. Each group of five will contain at least one vocabulary test, but the contents otherwise depend on the amount of grammer in the relevant lesson and its difficulty.

3. The students

Each year there are essentially two kinds of beginners: those taking NDS as a degree course and those taking Dutch language as part of another degree course (German, European Studies). The first group moves twice as fast as the second, which means that they take eight weeks to cover Levend Nederlands and the other sixteen.

4. The groups

For this survey I divided each of these two groups into two roughly equally large groups, one of which did the exercises on the computer while the other group, the control group, did exactly the same exercises on traditional worksheets. In order to arrive at a relatively even balance between groups, seven criteria were applied in the selection of students for each group. In rising importance these were: age, sex, typing experience, number of languages studied at O-level, number of languages studied at A-level, experience with computers and previous knowledge of Dutch. These variables were collected by means of an initial questionnaire, which also asked which languages had actually been learnt at school and what the nature of the typing and computer experience had been. In this way, a group of thirteen first-year students in NDS was divided into a group of seven using the computer and one of six using worksheets. The other group, of nine German finalists, was divided into a group of five using the computer and one of four using worksheets.

5. The data

Immediately before the course started, the students using the computer were given another short questionnaire to sound out their attitudes towards computers (and technology in general). A similar but more extensive questionnaire was given at the end of the experiment, after finishing Levend Nederlands.

Finally, all students did a short oral diagnostic test a few weeks after the course had finished, in which they were asked to perform 30 basic linguistic tasks. For each task they could score 0 - 5 points and the final scores were compared.

The data from the students using the computer was collected at the end of each exercise session by obtaining a print-out. The data from the

worksheet students was obviously a lot more cumbersome to collect. It involved handing out the worksheets, collecting completed worksheets, marking them, keeping track of the scores and handing them back to the students.

6. The results

The next stage was that of collating the data. The way I did this, was to enter the individual students' scores for each exercise on a score sheet, keeping computer students' and worksheets students' scores separate. I then calculated the scores in percentages and averaged the four different groups. Finally, I set the four scores out in a table for each exercise. Next, I classified all exercises according to the linguistic skill or skills they tested. There is a slight problem here in that these exercises were obviously not designed with this experiment in mind and some very clearly test more than one skill at a time. Therefore, I arrived at the following classification:

morphological exercises	29
vocabulary exercises	39
syntactic exercises	20
vocabulary/morphological exercises	5
morphological/syntactic exercises	5
revision exercises	5

The point of this was to see if students performed better in one type of exercise than in another within the two different mediums (computer and worksheets). With four groups in two sets, there are five different patterns of highest score:

1) both computer groups have the highest score
2) both worksheet groups have the highest score
3) the computer group of one set and the worksheet group of the other set have the highest score
4) the reverse of 3)
5) two or more groups have scored equally

The outcome for the various types of exercise is given in table 1b (see end), which tells us that, although in the majority of cases patterns 1) or 2) apply there is no marked difference between the scores of these two patterns. In other words, students do not necessarily do better in these kinds of exercises because a computer is used rather that worksheets, or vice versa. In fact, my expectations had been that vocabulary exercises would be done better on worksheets, because the student then has time to let the vocabulary sink in or even look things up, which is very unlikely if you are sitting behind a computer screen. Syntactic and morphological exercises, on the other hand, should score higher on the computer, because they are concerned with set patterns and structures which the computer's immediate response would reinforce as the exercise progresses. For vocabulary and syntax my expectations have come true, but as the table shows, not so for morphology.

Most interesting, of course, is the outcome of the test at the end of the experiment. The average scores of these were as follows (out of a maximum of 150):

MDS-c	109.86	option-c	125.67
MDS-w	131.33	option-w	125.75

Despite the discrepancy between the two MDS groups, a statistical analysis (the Mann-Whitney test, which is especially suited to small samples like this one) interprets the difference as insignificant. There is also an explanation for that discrepancy compared with the almost perfect match of the two option groups. This is that the option group as a whole tends to be much more homogeneous with respect to linguistic background and knowledege than the MDS group. Previous knowledge of Dutch amoung the option group is scarce, if not non-existent, whereas the Dutch of several of the MDS students is of a relatively high level. When the MDS students were divided, the worksheet group turned out to contain more of that kind of students than the computer group. This is probably because there is no time to test and assess the students' linguistic abilities at the beginning of the year and the decision is taken on basis of a mere questionnaire.

Generally, however, the data so far do not seem to suggest that doing exercises one way or the other has a great deal of effect on the student's eventual linguistic skills.

7. Attitude

The two questionnaires about the students' attitudes, finally, do not point into any firm direction at all yet, because so far the sample has been too small (only half of the total number of participating students). It seems wise, therefore, not to draw any conclusions on that score. The only remarks I would like to make, should be seen as very impressionistic. First, it struck me how some students could not remember their initial attitudes when asked in the second questionnaire what their answer had been in the first. If this turns out to be a trend, the whole question of attitude will become rather doubtful, of course. Secondly, amoung those who expressed a more consistent attitude, there was no marked shift and, on the whole, feelings about computers (and hence technology in general perhaps?) were slightly negative.

Roel Vismans
Institute of Modern Dutch Studies
University of Hull

Tables

Table 1a
highest-score patterns per exercise)

1 both computer groups
2 both worksheet groups
3 computer group of one set, worksheet group of the other
4 the reverse of 3
5 two or more equal scores

Table 1b

exercise type/score patters	1	2	3	4	5	total
morphology	11	13	3	2	-	29
vocabulary	13	19	4	2	1	39
syntactical	8	5	2	2	3	20
voc/morph.	1	3	1	-	-	5
morph/synt.	-	3	1	-	1	5
revision	2	3	-	-	-	5

PLENARY SESSION

It was agreed that a further 24-hour workshop be held, although opinion differed about the venue. Since Lancaster was situated in the middle of the country and offered good facilities for a workshop and course centre, it was decided that the workshop would again be held at St Martin's College.

The date of the next workshop would be 10th-11th September, 1985, thus avoiding a clash with a national CALL course to be held in Aberdeen during the following week. (Further details about the Scottish course, entitled 'The Microcomputer and the Language Specialist' can be obtained from Dr A J Campbell, Head of Languages, Aberdeen College of Education, Hilton Place, Aberdeen AB9 1FA.)

The workshop should comprise a blend of talks and hands-on experience sessions, and contain something for those in secondary education and those in higher education. The talks might focus on:

a) investigations into teaching, using the microcomputer as an aid, or on how the microcomputer could be integrated into the learning process;

b) expert systems, with the emphasis on a down-to-earth approach which would play down the technological and phychological aspects of the topic and refer, if possible, to language teaching.

The notion was put forward of establishing at CILT a database of national CALL activity in LEAs. It would inform CALL users and program-developers and enable them to exchange information and expertise with those in neighbouring LEAs. Those who provided information would, in turn, receive an annual update of national CALL activity by computer print-out.

(Editor's note. Eric Brown, with the support of Sue Hewer, has mailed two questionnaires to modern language advisers in all UK LEAs. One questionnaire requests general information from advisers about which models of microcomputer are in use locally, which foreign languages taught and whether there is a LEA CALL Development Group. The other questionnaire, which is for advisers to have duplicated and sent out to their heads of modern languages, seeks to ascertain which teachers actively use CALL in their teaching and which teachers are actively developing computer programs and packages. Information about the foreign languages and types of program involved is also sought.)

CALLBOARD

A report was given on 'CALLBOARD', the CALL Newsletter which appears infrequently each year and arose from the 1982 Workshop in Lancaster. It is devoted to the dissemination of information about ideas and activities in the field of CALL, including EFL and mainstream English, and is intended for those working in CALL.

Although the aim had been to produce three to four issues per year, only two had appeared during 1984 due, amoungst other problems, to shortage of copy.

At the time of the workshop, there were 243 subscribers on the British list and 51 subscribers from 20 countries on the foreign list. The foreign countries were Argentina, Australia, Brazil, Canada, Chile, the Federal Republic of Germany, Finland, France, Hong Kong, India, Italy, The Netherlands, New Guinea, Saudi Arabia, Spain, South Africa, Sweden, Switzerland, UAR and USA (including Hawaii).

It was pointed out that not all British subscribers were keeping up to date with their subscription payments. The CALLBOARD bank account was in credit (£237.68), but the forthcoming increase in postage might well require an increased subscription in 1985.

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If you have something to say, news to exchange, a technique to impart, a recently published article or book to report on etc, you can contribute to CALLBOARD as well as subscribing.

If you are not on the mailing list of CALLBOARD and wish to add your name to it, you may do so by sending £1.00 to:
Roger Savage, CALLBOARD Treasurer, 19 High Street,
Eccleshall, STAFFORD ST21 6BW, England.

Cheques should be made payable to CALLBOARD.

If you wish to contribute, you should send your item to:
Graham Davies, CALLBOARD EDITOR, Ealing College of Higher Education,
St Mary's Road, LONDON W5 5RF, England.

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Books on CALL

Ahmad, Corbett, Rogers, Sussex: Computers, language learning and language teaching. Cambridge University Press, 1985.

Davies, G: Talking BASIC. Cassell, mid-1985.

Davies, G & J Higgins: Computers, language and language learning. CILT, 1982. (Expanded update to appear in October, 1985.)

Higgins, J and T Johns: Computers in language learning. Collins, 1984

Kenning, [illegible] and [illegible] Kenning: Introduction to computer-assisted language learning. Oxford University Press, 1983.

Last, R: Language teaching and the microcomputer. Basil Blackwell, 1984.

A COMMENT ON THE WORKSHOP

There are a number of dangers inherent in the situation of a comprehensive schoolteacher working with and developing an area of CALL. The individual can find himself isolated from other influences and approaches. It can be all too easy to follow up enthusiasms, too caught up in the rush to pause and reflect on one's own work. It's like walking a tightrope trying to juggle with the roles of teacher, technician and programmer.

That is why I found the Lancaster workshop so valuable. It offered the opportunity to look at the work others are doing, to present one's own work for discussion and criticism and to see signs of the directions CALL might take in the future.

The fairground sessions provided an opportunity for dialogue and discussion with people involved in different sectors of education and with differing experiences and expectations of CALL. In a fairground session Peter Kershaw's video touched on a key area - the use of the micro in the classroom.

Generally, the workshop concentrated on the machine side of the machine-learner interaction. A variety of hardware was presented which enables us to move away from the concept of all CALL material involving writing via the keyboard and reading from the monitor. Concept keyboards, interactive cassette players and interactive video were demonstrated and convincingly indicated that - economic arguments aside - they have a role in CALL work.

Inevitably, a 24-hour workshop raises issues rather than settles them - this is its value. We do need, perhaps, to follow up the learner side of machine-learner interaction and the issues raised by the video. When I attend INSET sessions on modern languages and micro-computers, two issues dominate discussion. Teachers want to know what material is available - that is relatively easy to demonstrate. The other preoccupation concerns how to deploy micros in the classroom. We each have our own set of answers and suggestions to this but, I feel, it's an area we need to work on. While hardware and software are vitally important, the actual use made of the micro, its deployment, teacher and pupil attitudes to it, integration of programs into a teaching sequence are equally important.

Leslie Churchman
Kirkby Centre
Kirby-in-Ashfield
Notts.

Current research in Britain

The information set out here is extracted from the research register maintained by the Centre for Information on Language Teaching and Research. The third edition, Language and language teaching: current research in Britain 1975-77 (Longman, 1978) is being revised for publication by CILT in 1985, and this information is taken from the revised and new project entries that are now being edited. Only very brief details are set out in this paper; fuller information about these and other projects may be obtained direct from CILT.

As the register contains only information specially provided for it by researchers, this should not be taken as a comprehensive list of recent and current work. Details of additional projects will be welcomed at any time: a questionnaire is available on request from the Research Information section at CILT.

* New additions to the list are marked with an asterisk.

946 K Bung, Recall Training Consultants, 13 Wisteria Road, London SE13 5HW: Theory and practice of programmed foreign language instruction. Aims at establishing a cybernetic system of programme construction for all languages, although more frequent reference is made to English and German. Begun 1964. Some results published: details obtainable from CILT.

2028 Ms C Lorac (and 1 associate), Faculty of Education Studies, Brighton Polytechnic: Communication and social skills project. To examine the effects that pupils' producing television, film or tape/slide programmes has upon their learning and in particular upon the development of language and social skills. (Age range 11-19.) Begun 1976. Project report (published in book form in 1981) in CILT Library.

2213 Dr K Ahmad, Computing Unit and Dr G G Corbett, Department of Linguistic & International Studies and M R Colenso, Department of Linguistic & International Studies, University of Surrey: Computer assistance in the learning and testing of Russian morphology. To provide a set of programs to enable the learner (in the first two years of study) to practise and consolidate independently the main areas in Russian morphology. Begun 1976. Extended to German 1979. Applications of micro- and minicomputers will be investigated. Book to be published 1985; articles published: details obtainable from CILT.

2303 Dr J A M Howe, Department of Artificial Intelligence, University of Edinburgh (and 1 associate): Computer-based investigation of remedial teaching of reading. To develop a computer-based scheme by which backward readers can learn to use word attack skills to improve their reading competence. Begun 1974.

2327 Dr R W Last, Department of Modern Languages, University of Dundee: EXERCISE: a computer-assisted learning package. Preparation of an interactive computing package designed for elementary language teaching, but applicable in any learning situation in which there are one or more fixed answers to any fixed question. Begun 1977. Package in use at University of Hull. Enquiries to Professor P K King, Institute of Modern Dutch Studies.

2329 A Carter, Nene College, Moulton Park, Northampton (and 10 associates): Machine-assisted teaching. See Schools Council Project Profiles IN 09 01. Begun 1978. Videotape available from Schools Council Information Centres.

2433 G D Davies, Ealing College of Higher Education (and 3 associates): An investigation into the applications of computers to language teaching. Various computer-assisted language-learning packages are being developed. Begun 1978. Articles and information guide published.

2487 B Farrington, Language Laboratory, University of Aberdeen: Elaboration of materials for computer-based learning of French, post-A-level. To produce materials for self-instruction where students can have access to mainframe or micro-computer; also to explore the limitations and possibilities of computer-based learning for language at this level. Begun 1979. Paper published: details obtainable from CILT.

2647 Dr J A M Howe (and 1 associate), Department of Artificial Intelligence, University of Edinburgh: A computer-based teaching scheme for creative writing. Children will use computer programs to generate and transform text and to explore the process of story production. Begun 1977. Articles published (by the associate, M Sharples).

2648 Dr Marie-Madeleine Kenning, Language Centre, University of East Anglia and Dr M J Kenning, Computer Centre, University of Essex: Computer-assisted language teaching. To devise and implement a computer language which gives language teachers easy access to computer facilities.... To provide computer-based support materials which can be used in several ways. Begun 1979. Articles and book published: details obtainable from CILT.

2661 J A Coleman, Department of French, University of Glasgow (Project convenor: A Walker, Department of French, University of Stirling), under the aegis of the Scottish Universities French Language Research Association: Lyon à la une: functional French syllabus at university level. To create a syllabus to develop communicative competence... aimed initially at second-year university students. Teaching methods will include computer-assisted learning, videotapes and interactive video. Begun 1980. Articles published: details obtainable from CILT.

2673 Dr Noemi M Messora, Department of Italian, University of Warwick (and 3 associates): A language course for Italian: a study of audio-visual live material. To explore further openings for the use of language laboratories and synchronised visual materials in language teaching. Begun 1976. Article published.

2695 Ms L Candy, School of Mathematics, Statistics and Computing, Leicester Polytechnic (and 2 associates): Computer aids to the acquisition of basic English language skills. To develop a set of interactive computer programs to be used as aids in the teaching of first language skills involving the written medium. Begun 1980.

2703 Dr J H Connolly, School of Speech Pathology, Leicester Polytechnic: SABLE: Syntactic Analysis Basic Learning Exercises. To develop a set of computerised exercises to help in the teaching of grammatical analysis skills to undergraduates pursuing speech pathology courses. Begun 1978.

2712 M G Carr, School of Modern Languages and European History, University of East Anglia: Development of computer-assisted language learning packages. To develop test template packages for writing gap-filling exercises and question-and-answer drills. Begun 1980. Two CALL packages written: GAPFIL (published) and COMPUTADRIL.

2759 J Fox (and 2 associates), School of Modern Languages and European History, University of East Anglia: Methods of facilitating vocabulary learning. Project includes development of use of computer-assisted learning in presentation of vocabulary practice. Involves students of English for Special Purposes and Spanish. Begun 1979. Articles published.

2776 B Farrington (and 1 associate), Language Laboratory, University of Aberdeen: Scottish computer-based French language learning project. To investigate possible applications of computer-based learning of French at the level of CSYS (sixth-year school) and at first-year university level (development, piloting and evaluation of materials). Begun 1981. Programs developed for English to French translation (and in use at the University).

2799 P Power, North East London Polytechnic: Applications of microcomputers in TEFL. To develop program suites in BASIC and other languages. Concerned particularly with applications in English for special purposes. Emphasises modules/self-access learning to promote reading skills. Begun 1982. Articles published.

2802 Ms E England, Department of English, University of Wales Institute of Science and Technology: Teaching English as a foreign language and computing: problems and principles. To investigate the feasibility, appropriateness and potential of computing as a method of instruction; to establish guidelines on practical issues; to design and evaluate a computer unit for a course in academic writing skills for foreign students. Begun 1980. Thesis completed 1984: details obtainable from CILT.

2809 R J Elder and R Wills (and 2 associates), Dundee College of Education: Integrating the microcomputer into the language arts curriculum in the primary school. To attempt to identify attributes of the microcomputer which might be of greatest benefit with a language arts program; to identify and initiate appropriate classroom organisation; to create new software where appropriate. Begun 1982. Some results published: details available from Dundee College of Education.

2810 Dr M Gruneberg, Department of Psychology, University College of Swansea: Development of a linkword language system. To produce computer software packages for the teaching of French, German, Spanish and Italian vocabulary using a keyword system. Begun 1981. Packages published by several software companies.

2811 J J Higgins (and 1 associate), English Language Research Centre, University of Birmingham: Non-tutorial computer-assisted language learning in the British Council: a feasibility study. To report on the potential applications for CALL in British Council overseas teaching centres; to devise a specification for a minimum adequate 'kit' of programs and activities; to advise on hardware, maintenance and methodology. Begun 1982. Any aspects of the research with wider relevance to be made publicly available later. Article and book published.

2812 R Vismans (and 2 associates), Institute of Modern Dutch Studies, University of Hull: The use of a microcomputer in language teaching. To monitor progress of students using a computer-assisted beginners' course in Dutch, compare this with a group using traditional methods, and monitor student attitudes to CAL by means of questionnaires. Begun Oct 1983. Conference paper: details obtainable from CILT.

2822 Miss S J Fortescue, Eurocentre, Bournemouth: English for Arabs, using computer-assisted instruction. To prepare computer programs for Arab students not familiar with the Roman alphabet. Begun 1983.

2823 Mrs D M Watson (and 14 associates), Educational Computing Section, Chelsea College, London: Feasibility study for CAL in foreign languages (part of the Computers in the curriculum project). To investigate potential areas for use of CAL in the communicative approach to learning French and German at secondary school. Later to include English as a foreign language and foreign languages at work. Begun 1981.

2824 Miss J E Bright, Educational Computing Section, Chelsea College, London: Evaluative research for CAL in modern languages. To explore the potential of the micro for the communicative approach to language teaching. To evaluate the units being developed in the Computers in the curriculum project (see above). English as a foreign language to be included later. Begun 1982.

2866 Dr B L M Chapman (and 3 associates), School of Education, University of Bristol: Computer-assisted teaching of communication to handicapped users. To help profoundly prelingually deaf infants to read by engaging them in interactive and functional use of picture language. Begun 1982. Article published.

2876 R D Ward (and 2 associates), Department of Psychology, University of Hull: Computer-assisted learning and cognitive skills training. To develop computer-assisted learning programs which engage young pupils in a written dialogue about graphics displayed on a VDU; to study the interactive style of deaf children using the programs. Begun 1982. Programs include LANGUAGE AND THOUGHT and HIDDEN SHAPES AND SIZES: to be published by Acornsoft.

2891 R Beaton (and 11 associates), Language Centre, College of Ripon and York St John: North Yorkshire computer-assisted learning project. To write and disseminate CALL programs for pupils of modern languages and English; to increase awareness of CALL and encourage long-term adoption of programs through demonstrations and in-service activities; to exchange programs with other groups. Begun 1982.

2905 J A Campbell, Department of Languages, Aberdeen College of Education: Exploration of possible uses of the microcomputer in language learning. To explore a range of second-language learning programs, particularly those which enable the BBC micro to be used as a stimulus or reinforcement for whole-class, group or paired communicative language activities at secondary level. Begun 1982. Article published.

2907 Dr B Hill (and 5 associates), Language Centre, Brighton Polytechnic: Interactive video in the teaching of languages. To study the potential of interactive video, using laser discs and microcomputers. Also programs for teaching English as a foreign language to be developed. Begun 1983. Pilot programs at testing stage. National project in progress in conjunction with BBC.

2915 D Bradley (and 1 associate), Department of Languages, Heriot-Watt University : Development of a computer-based databank of Spanish neologisms. To collect from current publications a range of neologisms in Spanish, and to explore the possibility of organising and presenting this material on computer for use by undergraduates. Begun 1981.

2931 R M Johnstone (and 1 associate) Department of Education, University of Stirling : The potentialities and limitations of the microcomputer in respect of foreign language learning in secondary schools. To investigate the extent to which the micro can stimulate language use for communication; to produce criteria for evaluation of software and hardware...; to investigate the contribution of the micro to graded activities and tests, and its potential as a diagnostic instrument. Begun 1983.

2933 Dr Sandra Potestà, Department of Modern Languages, Sheffield City Polytechnic (and 2 associates): Computer-assisted language learning. To identify and suggest solutions to problems posed by programming for foreign language teaching via computer in higher education in Britain, France, Germany and Italy; to produce methodological guidelines and software packages. Begun 1982. Reports prepared : details from the investigator.

2954 E T Vanderpump, Bell School of Languages, Norwich and School of Modern Languages and European History, University of East Anglia (with supervisor): Computer-assisted language learning in an English language school : a case study. A study of the setting up of a CALL system in an ARELS school, to include hardware problems, timetabling, teachers' and students' responses. Also a review of published software... and possibly evaluation of different styles of CALL program. Begun 1981.

2961 Miss M J Leonard, Inner London Education Authority Computing Centre: The principles and a conceptual framework for computer-assisted learning in English as a foreign language, English as a second language and literacy. To produce a review of some currently-available materials, and guidelines for the future development of computer-assisted learning...; to develop a program to examine the feasibility of natural language input by the user. Begun 1984.

2973 Dr M D Vinegrad, Department of Psychology, Goldsmith's College, University of London: Computer-assisted learning: basic learning difficulties. To develop computer-assisted learning techniques for first-language learning with special reference to slow learners and dyslexia, with emphasis on programs which adapt to the needs of the individual learners. Begun 1982. Articles published.

*3046 Ms M L'Huillier, Language Centre, Brunel University (and 2 associates): The use of microcomputers in testing French grammar. To develop teaching material to allow students (post-'O'-level) to revise grammar points; use of existing authoring packages to develop courseware; creation of new packages. Techniques to be tested on students and comments from teachers to be sought. Begun 1984. Some results available: details obtainable from CILT.

*3048 M Picciotto, School of Computing & Information Systems, Lancashire Polytechnic (and 18 associates): North-west educational computing project: computer-based learning in foreign languages. To develop computer-based learning systems, using personal computers and interactive video; to explore the use of such systems for language learning in representative secondary schools; to develop computer-based network links between schools. Begun 1985.

*3054 Dr K S Gill, Department of Computing & Cybernetics, Brighton Polytechnic (and a team of associates): Computer-aided animated arts theatre (CAAAT). To develop microcomputer-based aids to enhance the communicative, creative and expressive skills of children with special needs, using computer graphics, story-telling, ... music, a speech-controlled robot arm and an interactive video system. For use in special schools ... and centres for handicapped children. Begun 1981. Project newsletter may be consulted at CILT.

* P T Culhane (and 3 associates), Department of Language & Linguistics, University of Essex: Microcomputers and language testing. Small-scale experiments, using EXTOL and BASIC computer languages, to test aspects of language not previously tested by other means, e.g. speed of response, aspects of lexical availability and of expectancy grammar. Begun 1984.

* D R Wilson, Harton Comprehensive School, South Shields: Teaching other languages to speakers of English with micro-computer assistance (TOLESMA). A school-based project to identify and explore computer applications in foreign language teaching (French and German). Initial focus on use of BBC 'B' micro as a professional aid to the teacher. Begun 1983. Extensive bibliography in preparation: section on Slavonic languages may be consulted at CILT.

* R Hancock, Department of Education, University of Sussex: Improving the communicative competence of the foreign language learner with non-verbal material on an interactive computerised video resource. To assess the value of increasing secondary-school students' awareness of the part played in the communicative process by non-verbal elements, using videotape or videodisc and BBC 'B' micro. Begun 1978.

* Williams, B C (with supervisor), University of London Institute of Education : Computer software for foreign language teaching : an evaluation of materials used in British secondary schools, with proposals for future developments. To establish criteria for evaluation of materials in French and German...; to apply criteria; to suggest future developments on the basis of the evaluation. Begun 1984.

Where numbers are given they are the entry numbers in the research register, and help users to trace further information in the register. There are - as yet - no numbers on the most recently received project descriptions.

Centre for Information on
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c CILT

List of Participants

Name	Institution
Dennis Ager	Department of Modern Languages, University of Aston
Richard Beaton	Ripon Language Centre, The College, Ripon
Eric Brown	CILT, London
Ian Brown	BBC, London
Mark Bryson	IEC, St Martin's College, Lancaster
Leslie Churchman	Holygate School, Bucknall, Nottingham
Graham Davies	Ealing College of Higher Education, London
Sarah Death	CILT, London
Gerold Deffner	Goethe-Institut, London
Françoise Démaizière	Département de Recherche Linguistique, University of Paris
Philip Dobison	Raynes Park High School, London
Maddalena Fagandini	BBC Continuing Education, London
Brian Farrington	Language Laboratory, University of Aberdeen
Sue Fortescue	Eurocentre, Bournemouth
Michael Gruneberg	Department of Psychology, University College, Swansea
Ake Hägg	Sweden
Peter Hall	Portland House Teachers Centre, Stoke-on-Trent
Susan Hever	Sleaford Modern Languages Centre
Ian Johnson	Dept. of Modern Languages, University of Dundee
Marie-Madeline Kenning	School of Modern Languages and European History, University of East Anglia, Norwich
Peter Kershaw	Wester Hailes Education Centre, Edinburgh
Tom Koet	Department of English, D'Witte Leli, Amsterdam
Derek Lewis	Department of Modern Languages, University of Dundee
Robert Lewis	IEC, St Martin's College, Lancaster
Charly Loveland	BBC, Leeds
David McCorkindale	Scottish Microelectronics Devt Programme, Glasgow
Dorothy McDonough	Monks Walk School, Welwyn Garden City
Hanno Martin	Goethe-Institut, York
Alan Page	Luton College of Higher Education
David Peacock	IEE, St Martin's College, Lancaster
Angela Pickering	The Language Centre, Brighton Polytechnic
Peter Roach	Dept of Linguistics & Phonetics, University of Leeds
Alan Shaw	Everton High School, Blackburn
Barbara Sietz	Goethe-Institut, London
Albert Sleutjes	The Netherlands
John Sutcliffe	Language Studies Unit, University of Aston
Roel Vismans	Institute of Modern Dutch Studies, University of Hull
Cathy Watts	The Language Centre, Brighton Polytechnic
Michael Woodhall	Language Learning Centre, Manchester

Workshop participants and work in progress

01. T Atkinson — CLS, Birmingham,

Centre for Linguistic Services, Bordesley Centre, Camp Hill, Stratford Road, Birmingham B11 1AR.

Is working with a small team, aiming to produce computer programs suitable for use in the teaching of modern languages to pupils in the 11-18 age range. In addition, the investigators are seeking to provide Birmingham teachers with a ready source of information about programs produced elsewhere, and are therefore building up a library of books, magazines, floppy disks and cassettes.

Completed programs will be available for use by all Birmingham teachers; exchange arrangements are being made with other local education authorities; a newsletter will be produced each term for distribution to all Birmingham schools and will be available externally through the Centre for Linguistic Services.

02. Richard Beaton — Ripon Language Centre

Ripon Language Centre, The College, College Road, Ripon HG4 2QX.

Has organised small INSET groups of FL teachers; is almost entirely self-taught, using BASIC on BBC, Pet and 380Z. Has produced elementary programs, mainly aimed at the 11-16 age-range.

Has approximately 30 short programs, mainly for BBC 'B', many of which are for exchange or sale. They comprise a mixture of 'drill-and-practice'; European Studies Quiz; game programs; simple Hangman, etc.

Hardware: permanent use of one BBC 'B', plus all peripherals. By booking, can avail himself of BBC 'B's, 380Zs or Pets.

Development work in progress: modifying and translating existing programs, writing new BBC program on shopping and food items (Beginners' French).

Interested in encouraging a wider take-up in schools, as the take-up so far has been very poor, and in encouraging the exchange rather than the sale of programs, and in looking at languages other that French or BASIC.

Funded solely by LEA. Has tried other sources, e.g. MEP, MSC, Nuffield, but without success.

Has gained considerable experience in the management of small development-groups and is curious at the total indifference of teachers of English.

03. Ian Brown BBC Publications

BBC Publications, 35 Marylebone High Street, London W1. 4AA

Development work in progress: is working on French software for the BBC adult education course A vous la France with Drs N and M-F Kenning (qv), and on German software with Dr Paul Meara.

Interested in genuinely interactive software for home micros.

BBC Publications are interested in all developments relating to using micro-computers as an additional aid to language learning.

04. L G Churchman Kirby Centre, Kirby-in-Ashfield, Notts

3 Georgia Drive, Redhill, Nottingham NG5 8HX

Has experience of using CALL in the classroom and of trying to integrate it into coursework. Has developed programs, originally for primary-school pupils, to be used in lower-secondary French.

Has produced: 1. "Actualités" project (sample available by sending a disc), a 6th-form-level news database and package of associated materials, mainly comprising news stories of which 74% derive from francophone contries. Is exploring the possibility of disseminating via viewdata system; 2. package (using Edfax) for 3rd-5th formers to (a) encourage skills associated with information retrieval; (b) encourage the location of material in French via indexes; and (c) use as a basis for communicative work.

Development work in progress: "Actualités", which at present comes in three-monthly package, but could be fortnightly on viewdate.

Interested in using micro to develop research skills and to provide basis for oral work.

Has no sources of funding, his being a one-man operation. As it grows, the funding/organisation will have to be put on a proper basis. Expressions of interesst are welcome!

Leaflet about "Actualités" available from above address, as is a sample disc. First full-issue is due out in March 1985. Welcomes the chance to discuss and develop this work with individuals and organisations.

05. Dr Greville Corbett University of Surrey

Linguistic and International Studies, University of Surrey, Guildford, Surrey GU2 5XH.

Has been working in team-contact with Dr Khurshid Ahmad and others since 1976. (See Margaret Rogers.) From concentrating originally on beginners, concern is now on advanced students. Orignally conducted work on mainframe (FORTRAN), now also on Apple and BASIC.

Has produced a range of programs, mainly on Russian morphology and syntax. Students in Years 1 and 2 are best provided for.

Hardward: FORTRAN BASIC, PRIME 9950, 750s (in net), also Apple IIe's.

Development work in progress is on the border between language learning and linguistics for advanced students.

Originally funded by MDPCAL.

Recent publications: "Computers, language learning and language teaching" by Ahmad, Corbett, Rogers and Sussex. Published by Cambridge University Press.

06. William D Cousin — Moray House

Scottish Centre for Education Overseas, Moray House College of Education, Holyrood Road, Edinburgh EH8 8AQ, Scotland.

Has been working since 1980 on the developmental use of IBM 4331 mini and BBC Acorn micro for clozentropy programs for Saudi (and other, mainly African) teachers in training for TESOL.

Has produced developmental versions of programs to make cloze tests, score responses and log responses into an "entropy" of previous scores on disk for BBC. This might be made available by negotiation with address above.

Hardware: various educational; mainly BBC micro, but also Apple, Commodore and some others, plus IBM as a mainframe.

Developmental work in progress: 1) third phase of computer clozentropy, looking at problem of teaching (esp. of discourse features) based on tutorial display of entropies; and 2) computer management of a resource.

Interested in CALL and in computer-management of a self-access, language learning resource.

Funded by college discretionary fund.

07. Graham Davies — Ealing College of HE

10 Wheatfield Close, Maidenhead, Berks, SL6 3PS

Has had nearly eight years of experience with CALL, using German, French, Spanish, Russian, and EFL, taking students from beginners to degree level. Hardware used has been mainly BBC micro (since 1982), though formerly Tandberg EC1C micro and Prime minicomputers.

Has produced a number of programs, most of which are available commercially: Apfeldeutsch (Apple II/IIe) - Wida software;

Questionmaster (PET/BBC/Apple) Hutchinson Software; Gapkit (PET/BBC) Camsoft/Wida Software; Copywrite (BBC) ESM; Clozewrite (BBC) ESM; Camsoft German (BBC) Camsoft; 'O' Level German Tutor (in progress, Commodore 64) Duckworth.

Hardware: BBC micro, Tandberg EC10 micro, Prime 500 & 750.

Development work in progress: writing programs for students of German - mainly commercial and aimed at home-computer owners.

Interested in CALL German/EFL. Programming in BASIC and his book, Talking BASIC, is due to be published in mid-1985 by Cassell.

Funded only by college resources and, in 1984/5, was granted a sabbatical year to further staff's knowledge of CALL. Formerly funded by BP Oil.

Is part-owner of CAMSOFT, a computer software house, consultant to several major publishing and software houses, and is currently acting as "talent scout" for software house seeking CALL material; has published numerous articles on CALL, plus CILT Information Guide 22, "Computers, language and language learning"; and is at present on the working party for the Open University German course and acting with Rex Last as a CALL consultant.

To be in charge of the national centre for CALL (C/CALL) at Ealing College of Higher Education. The Centre, which will be supported by a DES grant, will open in April 1985 and provide an information system, software holdings, software development, courses and training, and later, it is hoped, evaluation.

08. Miss Maddalena Fagandini — BBC TV

BBC TV, Continuing Education, Villiers House, The Broadway, London W5 2PA

Is producing and helping to organise the production of software to accompany French and German language courses (for BBC 'B' and possibly other micros).

Is interested in software to help students to learn rather than to test them, and in the interactive videodisc.

09. Brian Farrington — University of Aberdeen

Language Laboratory, King's College, University of Aberdeen, Aberdeen AB9 2UB
Has just completed a three-year project developing CALL materials for teaching translation at advanced (post-'A') Level.

Has produced LITTRE, a program for checking translation at sentence level. Apple II. (BBC version and authoring package in preparation.) System presents English sentence and prompts for translation into French, checks learner's sentence by searching a structured database in which, in theory, every possible acceptable

translation can be found, as well as most predictable mistakes. Has also produced GENDERS, a drill-and-practice program to teach French noun gender. Datafiles containing contextualised examples of about 500 words. Authoring and editing programs. Apple II. BBC version in preparation.

Hardware: Apple II, BBC 'B'.

Development work in progress: authoring package for LITTRE.

Funded by a grant from the Scottish Education Department.

10. Miss Sue Fortescue — Eurocentre, Bournemouth

Eurocentre, 26 Dean Park Road, Bournemouth, Dorset, BH1 1HZ.

Has five years experience in using CALL with adult EFL students.

Hardware: five BBC 'B's, printers and disk-drives.

Development work in progress: self-access and CALL - making systems user-friendly.

Interested in self-access.

11. Jeremy D Fox — UEA

Director of TEFL Programmes, School of Modern Languages and European History, University of East Anglia, Norwich NR4 7TJ.

From 1969-70, at Leeds University, where he produced vocabulary drills for ERL; from 1979 to present time, at UEA, where he is running TEFL programmess with CAL element, enabling future teachers to program in BASIC.

Has produced a number of programs, lexical COLLOCATIONS, verb drill DIAL-A-VERB (Spanish), text manipulation RESTORE BET DISCLOSE, and reading for a computer-assisted reading project.

Hardware: eight Apple IIs, six BBCs and a VAX11/780 mainframe.

Development work in progress: computer-assisted reading project (CAL course in EFL reading skills, possibly also relevant in first language situation).

Interested in computer-assisted reading and the extension of CALL in the direction of Intelligent Tutoring Systems, involving work in AI (eg expert systems) and use of high-level languages like LISP (even if still in its early days).

Funded by UEA.

12. Michael Gruneberg — University College of Swansea

Dept. of Psychology, University College, Singleton Park, Swansea

Has produced the French, German, Spanish and Italian basic-level Linkword programs. Linkword is a language course which intergrates vocabulary learning by means of visual images and other psychological principles with grammer learning.

The courses at present published are, or will shortly be, available on: Amstrad (publ. Protek); BBC 'B' and Electron (Acornsoft); CBM 64, Vic 20 and C16 (Audiogenic); Oric (Tansoft); Sirius, Apricot, Apple II and IBM PC (Act Pulsar); and Spectrum (Silversoft).

Courses of intermediate standard, covering major grammatical points up to 'O' level standard, are being published in German and French on Amstrad and Spectrum by Protek in February 1985. Other machines are likely to follow in due course.

13. Mrs Susan Hewer — Brealey Centre, St George's School, Sleaford, Lincs.

Brealey Centre, or Gosberton Fen Farm, Gosberton Clough, Spalding, Lincs PE11 4JS. Tel. 077 586 393.

Initial involvement was with PETs and with drill-and-practice routines. Has been working latterly with the ITMA collaboration in the adaptation of primary level, content-free programs for 2nd-language use at secondry level.

Has produced ITMA SLYFOX and CLUES programs on 380-480Z and BBC 'B' micors. Both programs are content-free. SLYFOX facilitates the creation and exploration of scenes, and CLUES offers a number of options concerned with the study of text. Both can be used throughout the secondary age-group. CLUES has potential at a higher level. Publication anticipated early in 1985.

Hardware: BBC 'B'; PAL/SECAM videocassette systems; Tandberg TCCR 530 lab. used with BBC 'B's.

Development work in progress; the setting up of the Brealey Centre and the exploration of the potential of the range of media available there, individually and interfaced where appropriate, in secondary language teaching and learning.

Funded privately and by LEA.

The Brealey Centre is in the course of construction and it is hoped that it will be open at the beginning of the Spring Term, 1985.

14. Ian Johnston — University of Dundee

Department of Modern Languages, The University, Dundee, DD1 4HN

Has some CALL experience with first-year university students and also run introductory sessions for teachers, using BBC micro and Tandberg EC-10 micro.

Has produced the German Sentence Building program, 6502 machine code for BBC 'B', for students from 3rd year at secondary school to second year at university.

Hardware: Tandberg EC-10, BBC 'B', 6502 second processor, Tandberg TCCR 530.

Development work in progress: context recognition for BBC and AECAL and translation processor for BBC.

Interested in natural language and AI.

Funded by SED and University of Dundee.

Program produced is available from Locheesoft, 4 Inverary Terrace, Dundee.

Is working on a book with Professor Rex Last.

15. Dr Michael J Kenning — University of Essex.

Department of Computer Science, University of Essex, Colchester, Essex CO4 3SQ.

Has contributed to the University of Essex M.A. in Applied Linguistics programme on computers and language teaching (using EXTOL and BASIC on mainframe and micros).

Hardware: DES 10 mainframe and sundry micros.

Development work in progress: 1. A vous la France software for BBC Publications (with Marie-Madeleine Kenning) and 2. French verb generator for Longman's (with Marie-Madeleine Kenning and P J Hexler).

Is interested in software development.

16. Peter Kershaw — Wester Hailes Education Centre, Edinburgh

13 Tippet Knowes Road, Winchburgh, West Lothian.

Is convenor of the Lothian Region working party, currently working with SMDP on developing software but experiencing delays.

Has produced one program, Au voleur, for BBC 'B', which his group will trade against programs from other groups.

Is interested in communicative language teaching using the micro and is moving away from the origination of programs towards the problems and rewards of the use of the micro in class. In this context, has written an article, "Mileage from the micro", which has appeared in Modern Languages in Scotland, no. 27, January 1985.

17. Ton Koet — d'Witte Leli

d'Witte Leli, Prinsengracht 303, Amsterdam, The Netherlands.

Hardware: Osbourne, Apple IIE, Phillips p2000.

Interested in reading comprehension, vocabulary teaching and testing.

18. Ms Germain Lalonde — Uxbridge Technical College

Uxbridge Technical College, Park Road, Uxbridge, Middlesex UB8 1NQ.

Has set up the CALL Centre for the London Borough of Hillingdon at her college, which has been functioning since September, 1983. Teachers meet every Monday to evaluate current CALL software, including programs for TEFL. They have found authoring packages to be the most useful. Users of the programs vary from ab initio learners to business people in firms, who enjoy using CALL to master the target language (French and German). A synopsis of the packages evaluated is issued at the end of each term to those who attended the sessions, and a brief report for June 1984 may be consulted at CILT.

19. Derek Lewis — University of Dundee.

Department of Modern Languages, The University, Dundee DD1 4HN.

Has experience of software production on Tandberg equipment, BBC micro in versions of BASIC and Assembler (8080 and 6500 series) and their use on university students at all levels.

See his contribution in the body of this Report under "Programs demonstrated". Has produced the CONTEXT Package for students of all levels from beginners to advanced, for BBC micro in English, French, German, Russian, Spanish and Scandinavian languages, and the INTERPRETER Package, also available in all major European languages and designed to simulate the situation of translator/interpreter, for BBC micro and Tandberg TCCR.

Development work in progress: AECAL, the use of the computer-controlled taperecorder.

Funded internally.

20. David Little — Trinity College

Centre for Language and Communication Studies, Arts Building, Trinity College, Dublin 2, Ireland.

Has developed the AUTOTUTOR, an interactive video system, using a BBC model B microcomputer with disk-drive and running MICROTEXT, a U-matic or VHS videocassette recorder, and a PAL/RGB/audio monitor. In principle, it is suitable for any level. (A more detailed description appears in the body of the report.)

So far, only pilot programs have been produced in the course of developing the systems. A network of experimental AUTOTUTOR users is to be established in the spring of 1985.

Hardware: BBC 'B', Cromemco System 3, Dec 20.

Is at present interested exclusively in interactive video.

Funded by the Research Fund of Trinity College.

21. Hanno Martin — Goethe-Institut, York

6, Arncliffe Mews, York, YO1 4EL.

Since July 1979, he has organised several workshops in York on computers/AI and foreign language teaching.

Has produced a disk with various programs, that is apparently available from the Ripon Language Centre. (See Richard Deaton.)

Development work in progress: a series of pattern drills which should be more or less portable, provided enough memory available.

Funded by the Goethe-Institut.

See his article in the main body of the report under "Programs demonstrated".

22. Mrs Dorothy McDonough — Monks Walk School, Welwyn, Herts.

Nuffield Modern Languages Centre, Rowans, Welwyn Garden City, Herts.

Experience using French programs on BBC 'B' with 2nd-4th Year classes of secondary pupils and of developing programs with a working party, assisted by the Chiltern Advisory Unit, based at AUCBE, Hatfield.

Hardware: two BBC 'B's and one 3802.

Funded by Chiltern Advisory Unit.

Has disseminated programs and successfully encouraged teachers in Herts schools to use CALL: more programs have, in consequence, been requested.

23. Alan Page — Luton College of HE.

Luton College of Higher Education, Foreign Languages Department, Park Square, Luton, Beds.

Has used BBC 'B' and Tandberg TCCR in German, French and Spanish in adult education, with HND Business Studies students and secretarial students. Has prepared students for Institute of Linguists Final and Intermediate examinations.

Has produced the following programs: TELEX, IMAGINARY DATABASE, DICTATION, DICTATION AUTHORING PROGRAM, GAPFILL, GAPFILL AUTHORING PROGRAM, CLOZE TEST. (See the body of the report under "Programs demonstrated".)

Hardware: IBM PC, BBC, VAX at college; BBC in Dept, and projected in Dept, Tandberg System 500 Language Lab. intergrated with BBC Econet for CAL and CALL.

Development work in progress: authoring program for GAPFILL and CLOZE TEST (with Tandberg TCCR) - validation stage. Intergrated authoring program for DICTATION, GAPFILL, CLOZE TEST programs - developmental stage.

24. Dr Martin Phillips — British Council

Project Manager (BC CALL Project), ELSD, British Council, 10 Spring Gardens, London SW1A 2BN.

The BC CALL Project aims to produce software specifically tailored to the needs of EFL teachers and learners. The materials produced are being piloted in a number of BC overseas teaching Centres with classes of all-ability levels. In the light of feedback from these Centres, the materials will be improved and developed. Hardware for the project has been provided by Acorn Company International Ltd.

Six prototype programs are currently being piloted. They are all for BBC 'B' microcomputers and are only available at present for internal use. They are OWEN, a text-based activity; CHATTERBOX, a conversational simulator; STORYLINE, a text-reconstruction activity; DECODER, decoding sentences; WORDRIGHT, matching roots and prefixes; and LETTERSHOOT, letter recognition and spelling.

Development work in progress: three more programs are being developed. FAST FOOD and FRONT PAGE, which are both simulations, and LONDON ADVENTURE, a problem-solving adventure game.

Interested in the theoretical framework for the development of CALL, in the relation of CALL to the syllabus, and in the methodology of CALL.

Funded internally.

STOP PRESS: BC CALL Project officially wound up on 31st March, 1985. Six of the programs produced by the Project may be published by CUP.

25. Ms Margaret Rogers — University of Surrey

Department of Linguistic and International Studies, University of Surrey, Guildford, GU2 5XH.

See also Grenville Corbett.

Work was begun in 1976 on Russian and in 1977 on German on PRIME 750 minicomputer. Packages cover aspects of syntax, morphology, vocabulary using variety of tutorial and non-tutorial techniques. Suitable for adult learners at beginners' or intermediate levels, or in a remedial capacity in some instances for advanced learners.

Programs for PRIME 750 written originally in FORTRAN. Now being reprogrammed in BASIC and also transferred to Apple IIe micro.

Hardware: PRIME 750 mini. and Apple IIe micros.

Development work in progress: use of CALL to bridge work in advanced language learning and linguistics. Consideration of possibilities for 'intelligent' CALL based on Artificial Intelligence techniques. Very speculative at this stage.

Funded by occasional, very small grants from the University of Surrey Research Committee.

26. Roger Savage — Staffordshire LEA

19 High Street, Eccleshall, Stafford, ST21 6BW.

Has used computer in file-handling situations as part of school-analysis administration work, and has close contact with Inspector for Computer Education.

Distributor of CALLBOARD, to which there are now 300 subscribers.

27. Ms Kathy Stones (Successor: Trevor Allin) — Herts LEA.

Education Department, County Hall Hertford, Herts, SG13 8DF.

Has produced many French and one German program for secondary-school pupils, for BBC and R&L 3802 micros.

Programs produced: see main body of report under "Programs demonstrated". GUESS, HEUELF 1, 2 & 3, DETECT, Burgundy DATA BASE and Burgundy MAPS, VOCOUR and MO/MOHIM.

Hardware: BBC 'B' and R&L 3802

Development work in progress: software to complement Hertfordshire graded tests in lower secondary school, and 6th-form work for private study.

Interested in programs that integrate into the secondary school foreign language programmes of work and give pupils greater access to independent learning.

No special funds; some LEA support.

Has been involved in a project, The computer as an aid to language learning, with a working party of teachers, to develop software to offer pupils in the modern language classroom greater access to independent learning through the medium of CALL. Project was begun in 1980.

28. John Sutcliffe

50 Hugh Dickson Road, Colchester, Essex CO4 5DE.

Has followed a course in CALL on M.Sc. (Teaching ESP) at L.S.U. (Aston) under Prof. D. Ager. Used BASIC with TRS-80 (Tandy), but mainly with BBC 'B' with disk-drive (CUMANA & TORCH) for EFL/ESP (Intermediate and Advanced). Has written a dissertation on software evaluation.

Hardware: two TRS-80 and four BBC 'B', with three CUMANA and one TORCH disk-drives.

Interested in software evaluation, programming games, simulations and role-plays.

29. Roel Vismans — University of Hull

Institute of Modern Dutch Studies, The University, Hull, HU6 7RX.

No programming experience, but has worked and is still working with TES/T program developed by Prof. R Last and Tandberg, at beginner's level.

Hardware: Tandberg EC-10.

Development work in progress: still working on validating and evaluating project as described in main body of report under "Programs demonstrated". Probable completion date: 1986.

Funded by the University of Hull.

30. Robert Ward — Trent Polytechnic

Dept of Computing, Trent Polytechnic, Nottingham NG1 4BU.
Tel. 0602 418248 x 2151.

Has experience of CAL for language-impared children and for developing language skills in English. Has used BBC micro and worked at primary school level and in a secondary hearing-impared unit.

Has produced programs in which interactive graphics are discussed through a natural-language interface.

Hardware: BBC and a wide range of personal computers, e.g. PDP 11/34, VAX785, DEC-20.

Development work in progress: as above, and also writing a Ph.D. on the interactivity of CAL software.

Interested in human-computer interaction, especially in CAL.

Associates are Messrs A B Rostron and D F Sewell, Dept of Psychology, Hull University (Educational Technology Research Group).

31. Mrs Deryn Watson — Chelsea College

Computers in the Curriculum Project, Chelsea College, (KQC), 552 Kings Road, London SW10.

Has been directing feasibility in developing CAL for language learning since Autumn, 1981.

Has co-produced COPROG, TRAVEL, METRO, ACCIDENT (French, COMAL Level 1), AUSWEIS, MIT DEM BUS ODER ... (German, COMAL Level 1), CALL MY BLUFF, CROSSWORD, BRANCHING STORY (English & EFL language generators). All nine programs are published by Macmillan Software.

Further language programs under development include EXCHANGE 1 & 2 (French), STADTPLAN and TOURING (German) - for COMAL Level 3.

All materials in French and German were developed in association with the Institute of European Education, St Martin's College, Lancaster, and with the COMAL scheme. All programs have been developed for use, with notes, on BBC 'B', RML 380Z and 480Z and Apple II micros.

Hardware: a large number of RML380Z, an RML LINK network system with Winchester disks, many BBC 'B', Sinclair ZX81 and Spectrum, two Apple II and one Apple Mackintosh.

Interested in the relationship between curriculum development and CAL; the generation of language at and away from the keyboard.

Funded by DES MEP.

This area of work is only part of the work of CIC in the development of appropriate CAL materials for many parts of the curriculum, e.g. Geography, History, Science.

32. Dr Sharon Wilkes — Five Ways Software

Five Ways Software Ltd, Imperial House, 350 Bourneville Lane, Birmingham B30 1QY. Tel. 021-477 0101.

Designer of French drill-and-practice programs for secondary schools - published by Heinemann Educational Books. Four more in this series are due for publication in 1985 on perfect and future tenses, and on imperfect and conditional tenses. Available for BBC 'B', Apple II and R.M 380Z. All enquiries to publishers in first instance.

Currently in 'lash-up' form are two French packages which will make use of the colour and graphics capability of the BBC machine. They should appeal to a wider school-audience, including French Studies. To be published by end 1985/early 1986 and supported with extensive 'student resource material'.

It is possible that one of these programs could also be published for different languages, including EFL. All programs subsidised by MEP.

Five Ways Software is a fully commercial entity, although it receives an MEP subsidy for the development of some school software, as it makes no profit from their sales to this somewhat restricted market.

33. Michael Woodhall — MBS

Manchester Business School, Language Learning Centre, Booth Street West, Manchester M15 6PB.

Experience in teaching businessmen foreign languages and English and games for management in English at an advanced level, and in developing language software for foreign languages at beginners' level.

The school buys in all its own material and creates its own files.

Hardware: Dept has Spectrum 48K and School has Apple and BBC models.

Intersted in self-study for foreign languages and in management games for English.

Funding is derived from income from courses run at the School.

* *

Please note that most of the aforegoing contributions are from participants who attended some or all of the four CILT CALL Workshops.

This information was accurate in December, 1984

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